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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,708	09/06/2005	Yoshitaka Sato	GUA UTO 318	8392

7590 06/22/2006

The Gates Corporation  
1551 Wewatta Street  
Denver, CO 80202

EXAMINER
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BALDWIN, KATHLEEN C

ART UNIT	PAPER NUMBER
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3682

DATE MAILED: 06/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/523,708

Applicant(s)

SATO ET AL.

Examiner

Kathleen Baldwin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 9/6/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/4/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-2, 4-7, and 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Takehiko Ito (US 2001/0039226).

Re clm 1, Takehiko ('226) discloses a transmission belt (60) comprising: a belt body (62) which is molded from a stock rubber; aramid fibers (80, 114) that are intermixed in said belt body (62) and oriented in a predetermined direction of said belt body (p 3, paragraphs 51, 52, 53) ; and polyester fibers (80, 114) that are intermixed in said belt body (62) and oriented in said predetermined direction (p 3, paragraphs 51, 52, 53) ; wherein said polyester fibers are longer than said aramid fibers(p 3, paragraphs 51, 52, 53) .

Re clm 2, Takehiko ('226) discloses the aramid fibers (114) and polyester fibers (114) are oriented in a width direction of said belt body (p 3, paragraph 53).

Re clm 4, Takehiko ('226) discloses length of said aramid fibers (114) is less than 3 mm (p 3, paragraph 52, fibers range from 1 to 10 mm).

Re clm 5, Takehiko ('226) discloses the length of said polyester fibers (114) is less than 5 mm (p 3, paragraph 52, fibers range from 1 to 10 mm) .

Re clm 6, Takehiko ('226) discloses a rubber component of said stock rubber is one of ethylene propylene copolymer, ethylene propylene, diene nitrile butadiene rubber, hydrogenated terpolymer, nitrile butadiene rubber, and chloroprene rubber (p 3, paragraph 51).

Re clm 7, Takehiko ('226) discloses the said polyester fibers are subjected to a treatment involving coating with a resorcinol-formalin-latex (p 3, paragraph 55).

Re clm 10, Takehiko ('226) discloses said transmission belt is a V-belt (60, see figure 3, sides at angle).

Re clm 11, Takehiko ('226) discloses said V-belt (60) is a cogged V-belt (see figure 1, 72,74).

Re clm 12, Takehiko ('226) discloses a transmission belt (60) comprising: a belt body (62) which is obtained and molded from a stock rubber in which aramid fibers (114) and polyester fibers (114) are intermixed (p 3, paragraph 50, 51, 52); and said polyester fibers being longer than said aramid fibers (p3, paragraph 52); wherein said aramid fibers (114) and said polyester fibers (114) are oriented in a predetermined direction of said belt body (62) (p3, paragraph 53).

2. Claims 1, 3-5, and 9-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Kumazaki et al. (US Patent 5,674,143).

Re clm 1, Kumazaki ('143) discloses a transmission belt (10) comprising: a belt body (12, 14, 16, 18) which is molded from a stock rubber; aramid fibers

(24) that are intermixed in said belt body (16) and oriented in a predetermined direction of said belt body (c 4, l 26-34, l 38-44); and polyester fibers (24) that are intermixed in said belt body (16) and oriented in said predetermined direction (c 4, l 26-34, l 38-44); wherein said polyester fibers (24) are longer than said aramid fibers (24, c 4, l 44-55).

Re clm 3, Kumazaki ('143) discloses 5 to 30 parts by total weight of said aramid fibers (24) and said polyester fibers (24) are intermixed in said stock rubber with respect to 100 parts of a rubber component of said stock rubber (c 4, l 56-59).

Re clm 4, Kumazaki ('143) discloses length of said aramid fibers (24) is less than 3 mm (c 4, l 47-48, fibers range from 2 to 6 mm).

Re clm 5, Kumazaki ('143) discloses the length of said polyester fibers (24) is less than 5 mm (c 4, l 47-48, fibers range from 2 to 6 mm).

Re clm 9, Kumazaki ('143) discloses said aramid fibers (24) is one of para aramid fiber and meta aramid fiber (c 4, l 48-55)

Re clm 10, Kumazaki ('143) discloses said transmission belt is a V-belt (10)

Re clm 11, Kumazaki ('143) discloses said V-belt (10) is a cogged V-belt (see figure 1).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takehiko ('226) in view of Kinoshita et al. (US Patent 5,891,561).

Takehiko ('226) discloses all of the claim limitations (as described above).

Takehiko ('226) does not disclose 5 to 30 parts by total weight of said aramid fibers and said polyester fibers are intermixed in said stock rubber with respect to 100 parts of a rubber component of said stock rubber.

Kinoshita ('561) teaches 1 to 30 parts by total weight of said aramid fibers (30) and said polyester fibers (30) are intermixed in said stock rubber with respect to 100 parts of a rubber component of said stock rubber (c 3, l 54-65). Kinoshita ('561) teaches when the fibers are less than 1 weight part, there is a tendency of the rubber to stick as a result of which it may wear excessively. When the fibers exceed 30 weight parts, the fibers do not disperse uniformly in the rubber. Kinoshita ('561) teaches the best range for quantity of fiber in the rubber.

It would have been obvious to one having ordinary skill in the art at the time of the invention was made use 1 to 30 parts by total weight of said aramid fibers and said polyester fibers that are intermixed in said stock rubber with

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respect to 100 parts of a rubber component of said stock rubber, as taught by Kinoshita ('561), with the v-belt of Takehiko ('226).

4. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takehiko ('226) in view of Kodama (5,908,520).

Takehiko ('226) discloses all of the claim limitations (as described above).

Takehiko ('226) does not disclose said polyester fiber is one of PET fiber.

Kodama ('520) teaches PET fiber to be a polyester fiber (c2, l 12-13).

PET fiber has a higher modulus of elasticity than other fibers. This allows for an increase in strength of the composition that the PET fiber is a component of.

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to use PET fiber as the polyester fiber, as taught by Kodama ('560), in the v-belt of Takehiko ('226), to increase the modulus of elasticity of the belt.

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kathleen Baldwin whose telephone number is 571-272-8973. The examiner can normally be reached on 7:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The

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fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KB 6/14/06

KB

  
RICHARD RIDLEY  
SUPERVISORY PATENT EXAMINER